Defining The Question Before Beginning Work:

Applying Standards Body Best Practices
to Environmental and Regulatory Review Processes

A Framework for CEQA, NEPA, and Federal Permitting

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Executive Summary

International standards bodies have developed rigorous methodologies for defining problems before authorizing technical work. In organizations like the International Telecommunication Union (ITU-T), ISO, and IEC, no standardization effort can begin until a formal **"Question"** has been posed, justified, reviewed, and approved through multi-stakeholder consensus processes.

This document applies these proven principles to environmental and regulatory review processes—specifically the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), and federal permitting frameworks. While environmental law contains analogous requirements through mechanisms like **"Purpose and Need"** statements and **"Project Objectives,"** actual practice often diverges significantly from the rigorous problem-definition standards observed in international technical standards development.

Key Findings:

- Environmental review processes often proceed with inadequately defined project objectives, leading to scope creep, inappropriate alternatives analysis, and regulatory failures
- The absence of formal problem validation mechanisms allows technically flawed premises to drive multi-billion dollar infrastructure decisions
- Standards bodies' requirement for explicit justification, resource assessment, and stakeholder consensus before work authorization could prevent many environmental review failures
- Case studies demonstrate that projects proceeding without properly defined "Questions" frequently encounter fundamental design errors, legal challenges, and implementation failures

This report proposes a structured framework for improving environmental and regulatory review processes by incorporating the discipline of formal problem definition that has proven successful in international standards development over decades of practice.

Introduction: The Power of Asking the Right Question

The Standards Body Paradigm

In international standards organizations like ITU-T, a fundamental principle governs all technical work: ***you cannot develop a standard until you have formally defined the Question you are trying to answer***.

This requirement is not bureaucratic formalism—it reflects hard-won lessons from decades of collaborative technical work involving governments, industry, and academia across national boundaries. The Question framework ensures:

- **Clear problem definition** before committing resources
- **Explicit scope boundaries** to prevent mission drift
- **Stakeholder consensus** on objectives before work begins
- **Resource justification** demonstrating feasibility
- **Coordination mechanisms** to avoid duplicative or conflicting efforts

The Environmental Review Gap

Environmental and regulatory review processes contain analogous requirements. NEPA mandates a **"Purpose and Need"** statement. CEQA requires specification of **"Project Objectives."** Federal permitting processes demand demonstration of **"public interest."**

However, the rigor applied to these requirements falls far short of standards body practices. Consider the key differences:

Element	Standards Bodies (ITU-T)	Environmental Review (CEQA/NEPA)
Problem Definition	Formal "Question" with specific task objectives required before any work	Purpose and Need often written to justify predetermined solution
Technical Validation	Multi-stakeholder expert review validates problem statement	Project objectives rarely validated against engineering or scientific fundamentals
Scope Control	Question explicitly defines boundaries; work outside scope requires new Question	Project scope frequently expands without triggering new environmental review
Accountability	Standards must answer the approved Question; divergence requires formal process	Limited mechanisms to ensure final project addresses stated objectives
Resource Assessment	Must demonstrate available expertise and feasibility before approval	Feasibility often assumed; technical capability not rigorously validated

		upfront

Core Concepts from Standards Development

The ITU-T Question Framework

Under ITU-T Rules of Procedure (WTSA Resolution 1), a **Question** is defined as:

> *"Description of an area of work to be studied, normally leading to the production of one or more new or revised Recommendations."*

Before a Question can be approved, proponents must provide:

1. **Specific task objectives** – What concrete deliverables will this work produce?
2. **Market needs and business drivers** – Why is this work necessary now?
3. **Potential participants** – Which organizations have relevant expertise?
4. **Related work assessment** – What has been done by other organizations?
5. **Regulatory/policy implications** – How does this affect legal frameworks?
6. **Degree of urgency** – Can this wait or must it proceed immediately?

Only after multi-stakeholder review and approval can work begin. The corresponding **Recommendation** (standard) must demonstrably answer the approved Question, ensuring accountability and traceability throughout the development process.

Key Success Factors

1. Problem Validation Before Resource Commitment

Standards bodies invest significant effort in validating that a genuine problem exists and that the proposed Question addresses it appropriately. This front-loaded validation prevents the common phenomenon where projects discover fundamental flaws only after substantial resource expenditure.

2. Explicit Scope Boundaries

Questions define not only what work *will* be done, but equally importantly what work will *not* be done. This prevents scope creep and ensures related but distinct problems receive separate, appropriately-scoped treatment.

3. Multi-Stakeholder Consensus

Questions are not imposed unilaterally. They undergo review by government representatives, industry experts, and academic specialists. This consensus-building identifies conflicts, overlaps, and technical concerns before work authorization.

4. Technical Feasibility Demonstration

Proponents must demonstrate that the organization possesses the expertise and resources necessary to answer the Question. Aspirational goals without demonstrated capability are rejected.

Current Environmental Review Framework

CEQA Project Objectives

California Environmental Quality Act (Public Resources Code §21000 et seq.) requires lead agencies to define **Project Objectives** in Environmental Impact Reports (EIRs). Per CEQA Guidelines §15124(b):

> *"The statement of objectives should include the underlying purpose of the project and may discuss the project benefits. The statement of objectives shall not be so narrow as to preclude consideration of a reasonable range of alternatives..."*

This requirement theoretically parallels the Question framework. However, critical differences exist:

- **No formal validation process** – Project objectives are drafted by the project proponent (often with financial interests) and typically adopted by the lead agency without independent technical validation
- **Solution-driven objectives** – Objectives are frequently written to favor a predetermined solution rather than neutrally defining the problem to be solved
- **Limited technical review** – Public comment processes focus on impacts analysis, not whether the fundamental objectives are technically sound or properly defined
- **Weak accountability mechanisms** – No requirement that the implemented project actually achieve the stated objectives

NEPA Purpose and Need

The National Environmental Policy Act (42 U.S.C. §4321 et seq.) requires federal agencies to include a **Purpose and Need** statement in Environmental Impact Statements. Council on Environmental Quality regulations (40 CFR §1502.13) state:

> *"The statement shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action."*

Similar to CEQA, NEPA contains the structural requirement but lacks enforcement mechanisms ensuring technical validity. Common problems include:

- **Circular logic** – "Purpose and Need" statements that essentially define the need as implementing a specific predetermined project
- **Factual inaccuracies** – Technical assertions in Purpose and Need statements that have not been rigorously validated
- **Inadequate problem definition** – Vague statements that do not provide sufficient specificity to guide alternatives analysis

Federal Permitting: Public Interest Determination

Federal agencies with permitting authority (e.g., U.S. Army Corps of Engineers under Clean Water Act §404) must determine whether proposed actions are in the **"public interest."** Per 33 CFR §320.4(a), this assessment considers:

> "...conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people."

This broad directive provides substantial discretion but lacks the structured problem-definition framework of standards bodies. Key gaps include:

- **No requirement to validate the technical premise** underlying the permit application
- **Minimal independent technical review** of applicant-provided engineering data
- **Deference to project proponents** on fundamental project definition questions

Note: EPA's §404(b)(1) Guidelines also constrain USACE discretion.

Failure Modes from Inadequate Problem Definition

Type 1: Solving the Wrong Problem

Failure Pattern: A project proceeds through full environmental review and implementation based on an incorrect or inadequately validated problem definition. Substantial resources are expended addressing symptoms rather than root causes, or pursuing solutions to problems that do not actually exist.

Real-World Example: Flood Control Infrastructure

A coastal restoration project defines its primary objective as "reducing flood risk in adjacent communities." However, the stated flood capacity specifications derive from outdated or incorrect engineering assessments. The project moves through CEQA review, receives permits, and undergoes construction—all based on flawed hydrological premises.

In a standards body framework, this failure would be prevented through:

- **Mandatory technical validation** of the flood capacity premises before Question approval
- **Expert review** by hydraulic engineers from multiple organizations
- **Requirement to reconcile** conflicting technical sources (e.g., if federal reports specify different capacity values)
- **Rejection of the Question** until fundamental technical disagreements are resolved

Type 2: Scope Creep and Mission Drift

Failure Pattern: Initial project objectives are narrow and well-defined. During implementation, scope expands to include additional goals without triggering new environmental review. The final project bears little resemblance to what was originally analyzed and approved.

Standards Body Prevention: In ITU-T, if work begins to address objectives outside the approved Question, the Study Group must either: (a) submit a revised Question for approval, or (b) propose a new Question for the additional work. The Recommendation can only be approved if it answers the authorized Question.

Environmental Review Gap: CEQA and NEPA allow substantial project modifications without triggering supplemental review if the lead agency determines changes are within the "scope" of the original EIR/EIS. This determination is highly subjective and often influenced by institutional pressure to avoid delay.

Type 3: Inadequate Alternatives Analysis

Failure Pattern: Project objectives are written so narrowly that they effectively predetermine the solution. Alternative approaches that might better serve the underlying public need are excluded from analysis because they don't meet artificially constrained objectives.

CEQA Guidelines acknowledge this risk, requiring that objectives "shall not be so narrow as to preclude consideration of a reasonable range of alternatives." However, enforcement of this requirement is minimal. Courts generally defer to agency objective-setting, and determining what constitutes "too narrow" is highly subjective.

Standards Body Contrast: Questions are reviewed by diverse stakeholders including competitors, alternative technology providers, and government representatives from multiple countries. This multi-stakeholder process naturally exposes artificially narrow problem definitions that favor predetermined solutions.

Type 4: Technical Infeasibility Discovered Late

Failure Pattern: A project proceeds through planning and environmental review assuming technical feasibility. During implementation, fundamental technical barriers emerge that were not identified because no one rigorously validated the engineering premises during the problem-definition phase.

This failure mode is particularly common in novel environmental restoration or large infrastructure projects where:

- Engineering complexity is high
- Prior examples are limited or non-existent
- Institutional pressure to proceed is strong
- Funding has been secured based on optimistic assumptions

Standards Body Prevention: Question proposals must demonstrate that the organization possesses the necessary expertise and resources. If a proposed Question requires capabilities the organization lacks, approval is denied until appropriate partnerships or resource commitments are secured.

Type 5: Segmentation and Piecemealing

Failure Pattern: A large program with interconnected elements is divided into separate projects, each with its own environmental review. This segmentation obscures cumulative impacts and prevents holistic assessment of whether the overall program serves the public interest.

CEQA prohibits "piecemealing" projects to avoid environmental review. However, enforcement is difficult and agencies often successfully argue that sequential projects are independently justified.

Standards Body Approach: When Questions overlap or depend on each other, Study Groups are required to coordinate. Joint working groups or explicit sequencing requirements ensure that interdependencies are recognized in the problem definition phase.

Proposed Framework: Structured Problem Definition for Environmental Review

Core Principles

The following framework adapts standards body practices to environmental and regulatory review:

Principle 1: No Project Proceeds Without an Approved "Environmental Question"

Before initiating CEQA/NEPA review, the lead agency must develop and approve an **Environmental Question** that explicitly defines:

- The specific problem to be addressed (not the solution)
- Measurable objectives that would constitute a successful answer
- Technical premises underlying the problem definition
- Explicit scope boundaries defining what is and is not included
- Related efforts by other agencies or organizations

Principle 2: Independent Technical Validation

The Environmental Question undergoes review by:

- **Multi-disciplinary expert panel** – Scientists and engineers with relevant expertise, selected to minimize conflicts of interest
- **Affected agencies** – Federal, state, and local agencies with jurisdiction or expertise
- **Stakeholder representatives** – Including potentially impacted communities and advocacy organizations
- **Academic reviewers** – University-based researchers in relevant fields

This review validates that:

- The identified problem genuinely exists
- Technical premises are accurate and based on authoritative sources
- Objectives are measurable and not solution-predetermined
- Scope is appropriate (neither too narrow nor too broad)

Principle 3: Explicit Feasibility Demonstration

Before approving the Environmental Question, the lead agency must demonstrate:

- **Technical capability** – That solutions to the identified problem are technically feasible with current knowledge
- **Available expertise** – That necessary scientific and engineering expertise exists and is accessible
- **Resource commitment** – That adequate funding exists to fully evaluate alternatives
- **Implementation authority** – That the lead agency has legal authority to implement potential solutions

Principle 4: Accountability Through Traceability

The approved Environmental Question becomes the baseline for all subsequent review. Any final project approval must:

- **Demonstrate how it answers the approved Question**
- **Document any deviations from original objectives** and justify why revised approaches better serve the underlying purpose
- **Include enforceable conditions** ensuring the project actually achieves stated objectives
- **Provide for adaptive management** if objectives cannot be met as originally envisioned

Implementation Procedures

Phase 1: Environmental Question Development (Pre-NOP/NOI)

Timeline: 60-90 days before Notice of Preparation (CEQA) or Notice of Intent (NEPA)

Activities:

- Lead agency drafts Environmental Question document following standardized template
- Identifies authoritative technical sources for all factual premises
- Reconciles any conflicting information in technical literature
- Documents coordination with other agencies on overlapping issues
- Prepares feasibility assessment demonstrating technical capability

Deliverable: Draft Environmental Question document for review

Phase 2: Technical Validation Review

Timeline: 45-60 days

Activities:

- Expert review panel examines technical premises
- Agencies with jurisdiction provide formal comments
- Academic peer review of scientific/engineering assertions
- Public stakeholder workshop to present Question and receive input
- Lead agency revises Question based on technical feedback

Deliverable: Revised Environmental Question with response to comments document

Phase 3: Formal Approval

Timeline: 30 days

Activities:

- Lead agency governing body holds public hearing on Environmental Question
- Expert panel presents findings on technical validity
- Stakeholders provide final input
- Governing body votes on Question approval

Decision Criteria:

- Technical premises validated by independent experts
- Problem definition not solution-predetermined
- Scope appropriate for single environmental review
- Feasibility adequately demonstrated
- No fundamental unresolved conflicts in technical literature

Deliverable: Approved Environmental Question serving as foundation for CEQA/NEPA process

Phase 4: Environmental Review (Modified CEQA/NEPA)

Standard CEQA/NEPA processes proceed, with the Environmental Question serving as the mandatory baseline for:

- Purpose and Need / Project Objectives (must align with Question)
- Alternatives analysis (must address Question, not predetermined solution)
- Impact assessment (impacts relative to solving defined problem)
- Mitigation measures (must ensure Question is actually answered)

Case Study Application: Ballona Wetlands Restoration Project

Project Background

The Ballona Wetlands Ecological Reserve restoration project in Los Angeles County, California, provides an instructive example of how inadequate problem definition can lead to decades of controversy and potential technical failures. This case study demonstrates how the proposed framework could have prevented fundamental issues.

Project Context:

- Location: 600+ acre wetlands adjacent to Ballona Creek, Los Angeles County
- Lead Agency: California Department of Fish and Wildlife (CDFW)
- Authorizing Statute: California Public Resources Code §5096.625 (2003)
- Environmental Review: Draft EIR released 2017, Final EIR certified 2020
- Status: Project approved but facing implementation challenges and ongoing controversy

Critical Technical Issue: Flood Capacity Specifications

A fundamental technical disagreement exists regarding Ballona Creek flood capacity specifications. This disagreement illustrates how the absence of mandatory problem validation can allow projects to proceed on technically flawed premises.

The Discrepancy:

- **Authoritative Source:** 1979 U.S. Army Corps of Engineers (USACE) report "Water Resources Development in California" (Bulletin 92-79) specifies Ballona Creek capacity as **82,000 cubic feet per second (cfs) terminal capacity** and **72,000 cfs upstream of the concentration point (CP) at Lincoln.**
- **“Ballona Creek - Channel and Sawtelle-Westwood Channel Hydrology Feasibility Report 021979”**
- **Reference:** **https://archive.org/details/ballona-creek-channel-and-sawtelle-westwood-channel-hydrology-feasibility-report-021979**
- **Project Documents:** CDFW's EIR and subsequent correspondence reference **68,000 cfs** capacity specifications
- **Magnitude:** This represents approximately a **21% discrepancy** between authoritative federal specifications and project planning documents

Documentation: The existence of this discrepancy is documented in public records including:

- California Coastal Commission correspondence (F9b-7-2024-corresp.pdf)
- Los Angeles County Flood Control District internal communications expressing doubt about the validity of 68,000 cfs specifications
- Public testimony at Regional Water Quality Control Board meetings (December 18, 2025)

How Standards Body Framework Would Have Addressed This Issue

Under Proposed Framework:

Step 1: Environmental Question Development

CDFW would have been required to draft an Environmental Question including:

- Explicit statement: "Restore wetlands functions while maintaining Ballona Creek flood protection capacity of [specific value] cfs"
- Citation to authoritative source for capacity specification
- Reconciliation of any conflicting capacity values in technical literature

Step 2: Technical Validation

Expert review panel would have immediately identified:

- Conflict between 1979 USACE report (82,000 cfs) and project documents (68,000 cfs)
- 21% discrepancy requiring resolution before proceeding
- Need for hydraulic engineering analysis to determine correct specification
- Potential flood risk implications of using incorrect capacity values

Step 3: Question Approval Decision

The Environmental Question would have been **REJECTED** pending:

- Definitive determination of correct flood capacity specifications
- Explanation of why different values appear in different documents
- Updated hydraulic analysis if needed to resolve discrepancy
- Formal agreement from USACE, LACFCD, and CDFW on authoritative specifications

Result: Environmental review would not have proceeded until this fundamental technical disagreement was resolved, preventing a multi-billion dollar project from being designed and approved based on potentially incorrect engineering premises.

Additional Issues That Would Have Been Identified

Beyond the flood capacity discrepancy, the Environmental Question framework would have surfaced additional concerns:

1. Scope Segmentation

The project was divided into "Sequence 1" and "Sequence 2" phases, potentially constituting improper CEQA segmentation. Standards body framework would require:

- Single comprehensive Environmental Question covering the entire restoration program
- Explicit justification if phases must be reviewed separately
- Demonstration that later phases are not dependent on approval of early phases (to avoid commitment trap)

2. Federal Permitting Bottleneck

The project requires Clean Water Act Section 404 permit from USACE. Standards body feasibility assessment would have identified:

- Need for early coordination with federal permitting agencies
- Potential conflicts between state and federal review standards
- Risk that state approvals could be granted before federal feasibility is established

3. Alternative Objectives

Multi-stakeholder review of the Environmental Question would likely have identified that some objectives could be achieved through less intensive alternatives, forcing more rigorous alternatives analysis in the EIR.

Benefits and Implementation Challenges

Primary Benefits

1. Prevention of Fundamental Technical Errors

The most significant benefit is preventing projects from proceeding based on incorrect engineering or scientific premises. Early technical validation saves enormous resources by identifying fatal flaws before substantial investment.

Quantifiable Value: For a $500 million infrastructure project:

- Environmental Question validation: ~$500,000 (expert panel, technical studies)
- Cost of discovering fundamental design error during construction: $50+ million (redesign, delay, legal exposure)
- ROI of upfront validation: 100:1 or greater

2. Improved Alternatives Analysis

By requiring problem-focused rather than solution-focused objectives, the framework ensures genuine consideration of alternatives. This benefits:

- **Cost efficiency** – Better alternatives may be less expensive
- **Environmental protection** – Less impactful alternatives receive fair consideration
- **Public acceptance** – Demonstrates good faith consideration of community concerns
- **Legal defensibility** – Reduces vulnerability to CEQA/NEPA challenges

3. Reduced Litigation Risk

Many environmental review lawsuits challenge inadequate project objectives or alternatives analysis. Front-end validation substantially reduces these vulnerabilities:

- Administrative record demonstrates rigorous problem definition
- Independent expert validation provides credible technical foundation
- Multi-stakeholder consensus reduces likelihood of legal challenges
- Courts more likely to defer to agency decisions supported by structured validation

4. Enhanced Public Trust

Transparent problem validation builds public confidence that agencies are making decisions based on sound technical analysis rather than political considerations or institutional inertia.

Implementation Challenges

Challenge 1: Additional Time Requirements

Concern: The proposed framework adds 4-6 months to project timelines before environmental review can begin.

Response:

- This time is recovered through reduced controversy and litigation
- Projects proceeding on flawed premises often face years of delay during implementation
- Ballona Wetlands case: 20+ years of environmental review could have been compressed if fundamental technical issues had been resolved upfront
- For urgent projects, expedited validation procedures can be developed

Challenge 2: Resource Requirements

Concern: Expert panels, technical studies, and validation processes require funding.

Response:

- Cost is small percentage of typical project budget (0.1-0.5%)
- Can be incorporated into existing environmental review budgets
- Many agencies already conduct similar technical reviews informally—framework formalizes existing practice
- Regional or statewide expert panels can serve multiple projects, reducing per-project costs

Challenge 3: Institutional Resistance

Concern: Agencies may resist additional review requirements, particularly if validation could reveal flaws in preferred approaches.

Response:

- Framework protects agency staff from political pressure to advance technically flawed projects
- Provides professional cover for saying "no" to problematic projects
- Reduces personal liability exposure for individual decision-makers
- Legislative mandate can overcome institutional inertia

Challenge 4: Defining "Independent" Expertise

Concern: Expert panels could be subject to conflicts of interest or regulatory capture.

Response:

- Establish clear conflict-of-interest policies (e.g., no financial relationship with project proponent or affected parties)
- Include diverse perspectives (academic, government, private sector)
- Rotate panel members to prevent institutionalization
- Public disclosure of all panel member affiliations and potential conflicts

Recommendations for Implementation

Phased Implementation Approach

Phase 1: Pilot Program (Years 1-2)

Select 3-5 major projects to test the Environmental Question framework:

- Diverse project types (infrastructure, environmental restoration, development)
- Multiple lead agencies (state, regional, local)
- Range of technical complexity levels
- Geographic distribution across California

Pilot Objectives:

- Refine Environmental Question template and procedures
- Develop expert panel selection criteria
- Test timing estimates and identify bottlenecks
- Document cost-benefit experience
- Assess stakeholder reception

Phase 2: Mandatory for Major Projects (Years 3-5)

Require Environmental Question validation for:

- All projects requiring EIR/EIS (not Negative Declarations or Categorical Exemptions)
- Capital value exceeding $50 million
- State or federal lead agency involvement
- Projects with high technical complexity or scientific uncertainty

Phase 3: Universal Application (Year 5+)

Extend to all discretionary projects requiring CEQA review, with scaled procedures based on project scope and complexity.

Legislative Framework

Recommended Statutory Language:

California Public Resources Code §21XXX: Environmental Question Requirement

> *"(a) Before issuing a Notice of Preparation for an Environmental Impact Report, the lead agency shall develop and approve an Environmental Question that:*
>
> *(1) Describes the specific problem to be addressed, formulated in terms of measurable objectives;*

(2) Cites authoritative sources for all technical premises;

(3) Reconciles any conflicting information in the scientific or engineering literature;

(4) Defines explicit scope boundaries;

(5) Demonstrates technical feasibility of potential solutions.

(b) The Environmental Question shall be reviewed by an independent expert panel appointed by [designated authority] and approved by the lead agency governing body in a public hearing.

(c) The approved Environmental Question shall serve as the mandatory baseline for project objectives in the Environmental Impact Report. Any final project approval must demonstrate how it answers the approved Environmental Question."

Supporting Infrastructure

1. Expert Panel System

Establish standing expert panels organized by subject area:

- Water Resources and Hydraulic Engineering
- Biological Resources and Ecosystem Restoration
- Transportation and Urban Infrastructure
- Energy and Climate
- Hazardous Materials and Public Health

Each panel comprises 7-9 members with 3-year staggered terms, ensuring continuity and institutional knowledge.

2. Technical Guidance Documents

Develop comprehensive guidance similar to CEQA Guidelines:

- Environmental Question Template and Instructions
- Expert Panel Operating Procedures
- Conflict of Interest Standards
- Public Participation Protocols
- Case Studies and Best Practices

3. Training and Capacity Building

Provide resources to support implementation:

- Workshops for lead agency staff
- Training modules for expert panel members
- Online resources and model documents
- Technical assistance helpline
- Annual conference on Environmental Question practice

Conclusion

International standards bodies have demonstrated over decades that rigorous problem definition before work authorization produces higher-quality outcomes, more efficient resource use, and stronger stakeholder consensus. These organizations succeed precisely because they invest substantial effort in answering the fundamental question: ***"What problem are we actually trying to solve?"***

Environmental and regulatory review processes contain analogous requirements through mechanisms like CEQA Project Objectives and NEPA Purpose and Need statements. However, these requirements lack the enforcement rigor and validation mechanisms that make standards body practices effective.

The result is predictable: projects proceed on inadequately validated technical premises, leading to:

- Solving wrong or non-existent problems
- Discovering fundamental technical errors late in implementation
- Artificially narrow alternatives analysis
- Prolonged litigation and public controversy
- Erosion of public trust in regulatory institutions

The framework proposed in this report adapts proven standards body practices to environmental review contexts. By requiring development and validation of an Environmental Question before CEQA/NEPA processes begin, agencies can:

- Prevent costly technical errors through early validation
- Improve alternatives analysis by focusing on problems rather than predetermined solutions
- Reduce litigation risk through rigorous administrative records
- Build public confidence in regulatory decision-making
- Ensure projects actually achieve their stated objectives

Implementation challenges exist—primarily related to time, resources, and institutional resistance. However, these challenges are manageable and the benefits substantially outweigh costs. A phased implementation approach with pilot testing can demonstrate value and build support for broader adoption.

Most fundamentally, this framework recognizes a truth that standards organizations learned long ago: **you cannot develop good answers until you have properly defined the questions**. Environmental protection, infrastructure development, and regulatory decision-making deserve the same disciplined approach that has proven successful in international technical standards development.

The time invested in properly defining Environmental Questions before beginning work is not delay—it is the foundation of effective, defensible, and ultimately successful project implementation.